Monitoring Data Record

Project Title: B-3856 (Br. #335 over Mud Creek) COE Action ID: 2007-1871-345
Stream Name: UT's to Mud Creek (Sites 1 & 3) DWQ Numbers: 070798
City, County and other Location Information: Henderson County, Bridge No. 335 over Mud Creek and approaches on SR 1238 (Pearl Lane)
Date Construction Completed: August 2008
Visual Monitoring Yearly: (2) of 3
Ecoregion: 8 digit HUC unit: 06010105
USGS Quad Name and Coordinates:
Rosgen Classification:
Length of Project: Site 1: 215 ft. & Site 3: 165 ft. (Total 380 ft.)
Urban or Rural: Rural Watershed Size:
Monitoring DATA collected by: M. Green Date: 7/28/10
Applicant Information:
Name: NCDOT Roadside Environmental Unit
Address: 1425 Rock Quarry Rd. Raleigh, NC 27610
Telephone Number: (919) 861-3772 Email address: mlgreen@ncdot.gov
Consultant Information:
Name:
Address:
Telephone Number: Email address:
Project Status: Complete

Monitoring Level required by COE and DWQ (404 permit/ 401 Cert.): Level (1) ~~2~~ ~~3~~
Monitoring Level 1 requires completion of *Section 1, Section 2 and Section 3*

Permit States: The permittee will visually monitor the vegetative plantings to assess and ensure complete stabilization of the mitigation stream segments. The monitoring shall be conducted annually for a minimum of three (3) years after final planting. Photo documentation should be utilized to document the success of the riparian vegetation and the results submitted in a final report to DWQ within sixty (60) days after completing the monitoring. After three (3) years a site visit shall be conducted by DWQ staff to "close out" the mitigation site.

Section 1. PHOTO REFERENCE SITES

Total number of reference photo locations at this site: Site 1: 3 photo point locations, 2 photos at each location Site 3: 3 photo point locations, 2 photos at each location.

Dates reference photos have been taken at this site: 8/10/09, 7/28/10

Individual from whom additional photos can be obtained (name, address, phone):

Other Information relative to site photo reference: A site map with approximate photo point locations is attached with this report.

Section 2. PLANT SURVIVAL
Attach plan sheet indicating reference photos.

Identify specific problem areas (missing, stressed, damaged or dead plantings):

Site 1 had some missing planted vegetation downstream of Photo Point #3 due to live stock grazing from the adjacent landowner.

Estimated causes, and proposed/required remedial action:
NCDOT plans to contact the landowner to remove the live stock from the stream. This area will be repaired and replanted.

ADDITIONAL COMMENTS: Seedlings noted on the streambank and in the floodplain consisted of black willow, silky dogwood, tulip poplar and tag alder. Other vegetation noted consisted of *Juncus* sp., jewelweed, sedge, tear-thumb, locust, pokeberry, lespedeza, and various grasses. NCDOT will continue to monitor vegetation at these two stream relocations.

If required to complete Level 1 and Level 2 monitoring only stop here; otherwise, complete section 3.

Section 3. CHANNEL STABILITY

Visual Inspection: The entire stream project as well as each in-stream structure and bank stabilization/revetment structure must be evaluated and problems addressed.

Report on the visual inspection of channel stability. Physical measurements of channel stability/morphology will not be required. Include a discussion of any deviations from as-built and an evaluation of the significance of these deviations and whether they are indicative of a stabilizing or destabilizing situation.

This is the 2nd year of monitoring for the Unnamed Tributaries to Mud Creek. Site 1 was experiencing some localized bank scouring along the upper portion of the stream noted during the 2009 evaluation but the channel bed appears to be holding grade and this area is highly vegetated. Site 1 has some bank erosion downstream of Photo Point #3 due to live stock from the adjacent landowner. NCDOT is currently working to remove the live stock and repair the stream at Site 1. Site 3 appears to be stable throughout the entire length of the stream relocation. NCDOT will continue to monitor the Unnamed Tributaries to Mud Creek.

Date Inspected 7/28/10	Station Number 13+00-L- Downstream of Photo Point #3 @ Site 1	Station Number	Station Number	Station Number	Station Number
Structure Type	.				
Is water piping through or around structure?					
Head cut or down cut present?					
Bank or scour erosion present?	Bank erosion from live stock				
Other problems noted?					

Section 4. DEBIT LEDGER

The entire UT's to Mud Creek (Sites 1 & 3) stream mitigation site was used for the B-3856 project to compensate for unavoidable stream impacts.

Site 1

Photo Point #1 (Upstream)

Photo Point #1 (Downstream)

Photo Point #2 (Upstream)

Photo Point #2 (Downstream)

Photo Point #3 (Upstream)

Photo Point #3 (Downstream)

Year 2 – July 2010

Site 1

Site 1 (Adjacent Landowner fenced in stream for livestock watering)

Site 3

Photo Point #1 (Upstream)

Photo Point #1 (Downstream)

Photo Point #2 (Upstream)

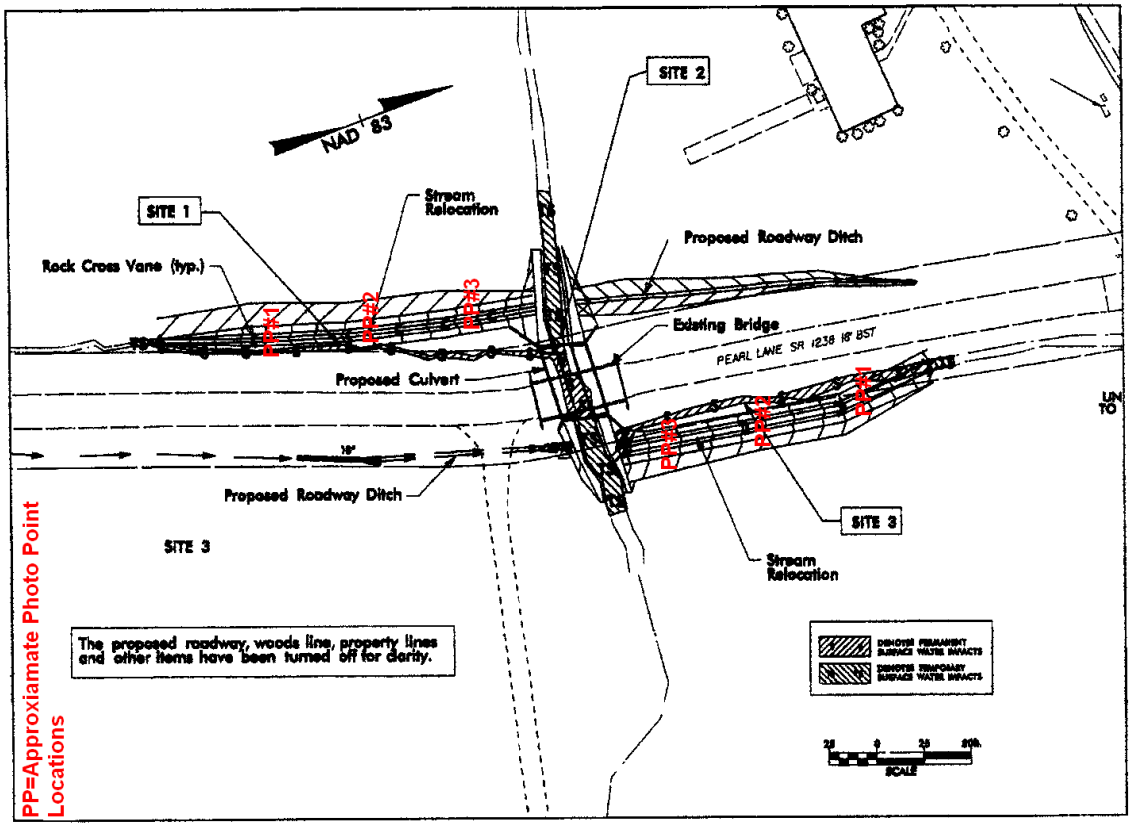
Photo Point #2 (Downstream)

Photo Point #3 (Upstream)

Photo Point #3 (Downstream)

Year 2 – July 2010

Enlargement



PRELIMINARY PLANS

Permit Drawing Sheet 10 of 14